

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) An electrolytic plating method, comprising:

using a wiring board, wherein a surface of the wiring board having formed thereon microvia holes having a copper foil at the bottom of each microvia hole, as one pole, and an insoluble electrode as the other pole;

stirring a metal plating solution which contains iron ions of at least 0.1 gram/liter so as to make the solution flow in parallel to a surface to be plated of the wiring board; and

performing electrolytic plating by applying a forward/reverse current with the use of a metal plating solution so that the microvia holes having the copper foil at the bottom formed on the surface of the wiring board may be filled up with metal plating.
2. (Previously presented) The electrolytic plating method according to claim 1, wherein:

the metal plating solution is composed of copper plating solution; and

the flow rate of the copper plating solution is adjusted to a level at which copper deposition speeds both on the surface and inside microvia holes of the wiring board are optimum.
3. (Previously presented) The electrolytic plating method according to claim 2, wherein

the flow rate of the copper plating solution is adjusted to bring the iron ion amount present near the wiring board surface to a level at which all the microvia holes are almost fully filled and the plating layer thickness on the wiring board surface becomes optimum.

4. (Previously presented) The electrolytic plating method according to claim 1, wherein:
the insoluble electrode is configured by a multi-aperture metal mesh.
5. (Original) The electrolytic plating method according to claim 1, wherein:
the metal plating solution is a copper plating solution; and
the wiring board is a printed-circuit board.
6. (Original) The electrolytic plating method according to claim 1, further comprising:
arranging a plating bath which accommodates the insoluble electrode and the wiring board, and a copper dissolved bath which supplies copper ions to said plating bath; and
circulating a solution within the copper dissolved bath and the plating solution within the plating bath.
7. (Currently amended) An electrolytic plating device for a wiring board, comprising:
an insoluble electrode, which is an electrode as opposed to a wiring board;
a metal plating solution containing iron ions by of at least 0.1 gram/liter or more;
a power source for performing electrolytic plating by applying a forward/reverse current between the wiring board and said insoluble electrode; and
a stirring unit stirring ~~and moving the said metal~~ plating ~~metal~~ solution to make the solution flow in a direction parallel to the wiring board ~~a surface on which a plating layer is generated to be plated of said wiring board~~ so that microvia holes ~~disposed on the wiring~~

board are filled with metal plating having a copper foil at the bottom, which are formed on the surface of said wiring board, may be filled up with said metal plating.

8. (Previously presented) The electrolytic plating device according to claim 7, wherein:
the metal plating solution is comprised of copper plating solution; and
the stirring unit adjusts a flow rate of the copper plating solution to a level at which copper deposition speeds both on the surface and inside microvia holes of the wiring board are optimum.
9. (Previously presented) The electrolytic plating device according to claim 8, wherein
the stirring unit adjusts the flow rate of the copper plating solution to bring the iron ion amount present near to wiring board surface to a level at which all the microvia holes are almost fully filled and the plating layer thickness on the wiring board surface becomes optimum.
10. (Original) The electrolytic plating device according to claim 9, further comprising:
a plating bath accommodating the insoluble electrode and the wiring board; and
a copper dissolved bath supplying copper ions to said plating bath, wherein
said stirring unit circulates a solution within the copper dissolved bath and the plating solution within the plating bath.
11. (Original) The electrolytic plating device according to claim 7, wherein:
said insoluble electrode is implemented by a multi-aperture electrode; and

DOCKET NO.: TALW-0180
Application No.: 09/805,841
Office Action Dated: May 5, 2003

PATENT
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37 CFR § 1.116

said plating solution is implemented by a copper plating solution.